Claims

[c1] 1. A method, comprising:
applying an input optical beam to an array of reflector elements;
reflecting said input optical beam through said array to form an output optical beam; and
controlling said reflector elements using digital bits, such that each change of each single digital bit changes an output position of said output optical beam.

[c2] 2. A method as in claim 1, wherein said mirror array includes a plurality of moving mirrors, each of which deflects said input optical beam according to said digital bits.

[c3] 3. A method as in claim 2, wherein at least some of said plurality of moving mirrors are each moved by a different amount than others of said moving mirrors.

[c4] 4. A method as in claim 2, wherein said plurality of moving mirrors are each moved by the same amount.

[c5] 5. A method as in claim 2 wherein each of said plurality of moving mirrors has a substantially different size.

[c6] 6. A method as in claim 1,wherein said mirror array includes an array of movable mirrors, and at least one unmovable mirror, positioned in a location to reflect light from one of said movable mirrors to another of said movable mirrors.

[c7] 7. A method as in claim 6, wherein said unmovable mirror is substantially flat.

[c8] 8. A method as in claim 6, wherein said unmovable mirror is substantially curved.

[c9] 9. A method as in claim 6, wherein said unmovable mirror includes a plurality of separated parts, collectively defining a curved profile, but each of

said separated parts being substantially flat.

[c10] 10. A method as in claim 6, wherein said unmovable mirror includes a plurality of angled surfaces.

[c11] 11. A method as in claim 6, wherein said angled surfaces are Fresnel surfaces.

[c12] 12. A method as in claim 4, further comprising changing an angle of attack for each of a plurality of reflections.

[c13] 13. A method as in claim 1, wherein said mirror array includes a first sub array of movable mirrors extending along a first specified shaped surface, and a second sub array of movable mirrors extending along a second specified shaped surface.

[c14] 14. A method as in claim 13, wherein said first and second shaped surfaces are substantially flat.

[c15] 15. A method as in claim 13, wherein said first and second specified shaped surfaces are substantially curved.

[c16] 16. A method as in claim 15, wherein each of said mirrors are substantially flat.

[c17] 17. A method as in claim 13, wherein each of said reflector elements includes a reflective membrane which is moved between first and second positions.

[c18] 18. A method as in claim 13, wherein each of said reflector elements includes first and second parts which are movable relative to one another.

[c19] 19. An optical device comprising:
an array of movable reflector elements; and
a controller for said array of reflector elements, said controller operating based on a plurality of digital bits which operate to change a position of said array of reflector elements to produce an output beam at a position based on

said digital bits.

[c20] 20. A device as in claim 19, wherein each of said reflector elements comprises a movable, reflective membrane.

[c21] 21. A device as in claim 19, wherein each of said reflector elements comprises first and second parts, which reflect light from a first location when touching one another, and reflect light from a second location when not touching one another, and an element for moving said first and second parts relative to one another.

[c22] 21. A device as in claim 19, further comprising a plane mirror, which reflects between different ones of said reflector elements.

[c23] 22. A device as in claim 21, wherein said plane mirror is substantially flat.

[c24] 23. A device as in claim 21, wherein said plane mirror is formed along a curved area.

[c25] 24. A device as in claim 23, wherein said plane mirror is formed of a plurality of different mirrored elements, each of which is substantially flat.

[c26] 25. A device as in claim 19, wherein each of said reflector elements are movable by different amounts.

[c27] 26. A device as in claim 19, wherein each of said reflector elements are movable by the same amount.

[c28] 27. A device as in claim 19, wherein each of said plurality of moving mirrors has a substantially different size.

[c29] 28. A device as in claim 27, wherein there are a series of said movable mirrors, and at least a plurality of said movable mirrors are twice as large as a movable mirror prior to it in said series.